

END ~~822-02~~  
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November 16, 1989

Dr. Robert Hamilton  
Raven Services Corporation  
2200 Sixth Avenue, Suite 519  
Seattle, WA 98121

Dear Bob:

This letter authorizes Raven Services to perform work authorization 89-16 "Excavated Soils Testing at the Georgetown Steamplant." Enclosed are the scope of work and budget; the total budget allowed is \$1,611.00. Of this total, \$120 is for WBE subcontractor work.

Thank you for your assistance to City Light.

Sincerely,

Kirvil Skinnarland, Director  
Environmental Affairs Division

CO:bb

Enclosure

bcc: w/enclosure  
O'Quinn  
Tenney  
EAD ~~822-02~~ 772  
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## WORK ORDER 89-16

### Excavated Soils Testing at the Georgetown Steamplant

#### I. SCOPE OF WORK

During the first quarter of 1989, three obsolete fuel tanks were removed at the Georgetown Steamplant facility. Approximately 100 cubic yards of soil, excavated in conjunction with the tank removal project, were stockpiled on-site and covered with visqueen. This material is contaminated with bunker C fuel oil; the extent and level of contamination is unknown.

Raven will collect soil samples in order to develop a representative contamination profile of the excavated soils. All samples will be analyzed for TPH and PCB contamination. This information is required in order to assess disposal options for the stockpiled material.

#### II. SAMPLES

The number and location of samples to be taken will be determined by Raven Services. However, the sampling scheme should be sufficient to identify the levels of TPH and PCB contamination. Site history indicates that an EP Toxicity Screen is probably not necessary, however, if TPH results indicate that this test is warranted Raven is authorized to arrange for the additional analysis.

Since analysis results are required within the week, all samples will be analyzed locally at Federal Testing Laboratories in Seattle, Washington.

#### III. SAMPLING METHODOLOGY AND REPORT

##### A. Methodology

1. Collection, storage, processing, and analysis of samples will be according to current USEPA Standards. PCB analysis will follow Method 8080; TPH analysis will follow EPA Method 418.1.
2. Sampling equipment will be decontaminated between each sample. Solvent rinse will be collected.
3. Appropriate protective gear will be used to ensure safety for the sampling crew.
4. After all analyses are completed, any remaining sample materials, if they constitute a hazardous material, may be returned to City Light for appropriate disposal.

5. Drawings will be provided on which the location of samples will be marked.
6. Sample chain-of-custody procedures will be used when requested.

#### B. Report

The Raven Report will include:

1. Description of the conditions and date(s) of sample collection.
2. Documentation of preparation of sampling equipment and containers to avoid sample contamination.
3. Description of containers, procedures, reagents, etc., used for sample collection, preservation, transport, and storage.
4. Field sampling procedures.
5. Sample preservation methods and holding time.
6. Sample chain-of-custody procedures when required.
7. Documentation of methods for sample processing and analysis (including any changes from the test procedures in Method 8080 and 418.1 in method, apparatus, reagents, calibration, quality control, extraction, separation, gas chromatography, or calculations.
8. Laboratory results expressed on a dry-weight basis and identifying PCB composition or Arochlor species, including a brief description of the sample material (e.g., concrete, soil, grave, etc.).
9. Documentation of each sampling site.
10. An interpretation of the data along with conclusions and recommendations.

#### IV. SCHEDULE

	DUE DATE
Sample collection	- Day 0
Draft report to EAD	- Day 21
Final report to EAD	- one week after review of draft by EAD

## V. BUDGET

Startup	\$ 90.00
Field:	
Raven Project Manager - 5 hrs @ \$47/hr	235.00
Office:	
Project Manager, 5 hrs @ \$45/hr	225.00
Project Assistant, 2 hrs @ \$35/hr	70.00
WBE Graphics, 3 hrs @ \$40/hr	120.00
Raven 15 percent WBE Carrying Cost	18.00
Other:	
Analysis, 6 PCB & TPH @ \$138/each	828.00
Chemicals, glassware	19.00
Truck Travel, 24 miles @ \$.25/mile	<u>6.00</u>
TOTAL BUDGET:	\$1,611.00